CARIBBEAN METEOROLOGICAL ORGANIZATION

CARIBBEAN METEOROLOGICAL COUNCIL **Doc. 5**
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SPECIAL WMO SESSION
(Submitted by the Coordinating Director)

Introduction

1. This document is to keep the Council informed on the major decisions and actions of the *World Meteorological Organization* (WMO) that are of special interest to the CMO Member States. Some of the decisions of WMO will require decisions or actions by Council to ensure that CMO Member States adhere to commitments and requirements emanating from the decisions of the WMO Congress, the supreme body of the WMO.

2. The **Extraordinary World Meteorological Congress 2025** (Cg-Ext 2025) was held in a hybrid mode from 20-23 October 2025 in Geneva, Switzerland and was followed by the **Extraordinary Session of the Executive Council** (EC-Ext2025) on 24 October 2025. The **79th Session of the WMO Executive Council** (EC-79) was held on 16-20 June 2025, while the Extraordinary session of the Commission for Weather, Climate, Hydrological, Marine and Related Environmental Services and Applications (SERCOM-Ext 2025) was held virtually from 18 to 20 March 2025.

3. Council is asked to note the region's role and responses to these major WMO implementation activities, several of which have been addressed by Council over the last few years. They include such priorities as the compulsory implementation of improved observation and information systems, "***Early warnings for all***" per the mandate issued to WMO by the UN Secretary-General, and strengthening the capacity of National Meteorological Services in developing countries. Council is asked to take note of outcomes below, including the important Tropical Cyclone Programme, which is crucial to all Member States of the CMO:

(a) Outcomes/Highlights of the Extraordinary World Meteorological Congress, 79th Session of the WMO Executive Council and the Extraordinary Session of the Executive Council
(b) Outcomes/Highlights of the 19th Session of Regional Association IV
(c) Issues emerging from meetings of the WMO Technical Commissions and Research Board in 2025
(d) UN Early Warnings for All
(e) WMO Integrated Global Observing System, Global Basic Observation Network and Systematic Observation Finance Facility (SOFF)
(f) The Global Framework for Climate Services (GFCS) and other Services
(g) Disaster Risk Reduction and Regional Severe Weather Forecasts and Warning Systems
    - Tropical Cyclone Programme
    - Severe Weather Forecasting Programme
(h) Business Continuity Management

Preamble: Role and Structure of the WMO

4. The ***World Meteorological Organization*** (WMO) is the Geneva-based UN-Specialized Agency that is the UN system's authoritative voice on the state and behaviour of the Earth's atmosphere, its interaction with the oceans, the climate it produces, and the resulting distribution of water resources. In other words, "weather, climate, water, and the environment".

5. Because of the very nature of the atmosphere, international cooperation at a global scale is essential for the development of meteorology and operational hydrology down to the national level, for countries to reap the benefits from the global scientific and technical application in these fields. WMO provides the framework for such a unique international cooperation which, as a result, exists among every nation of the world, whether large or small, continental or island, developed or developing. Therefore, the manner in which WMO functions affects the ***National Meteorological and Hydrological Service*** **(NMHS)** of every country.

6. Since its establishment in 1950, WMO has played a unique and powerful role in contributing to the safety and welfare of humanity. Under WMO leadership and within the framework of WMO programmes, *National Meteorological and Hydrological Services* contribute substantially to the protection of life and property against natural disasters, to safeguarding the environment and to enhancing the economic and social well-being of all sectors of society in areas such as food security, water resources, transport, and health.

7. The structure of the WMO comprises the ***World Meteorological Congress***, the supreme body, an *Executive Council*, six *Regional Associations*, the Geneva-based Secretariat, and the *Commission for Observation, Infrastructure and Information Systems* (Infrastructure Commission, INFCOM), the *Commission for Weather, Climate, Water and Related Environmental Services & Applications* (Services Commission, SERCOM), and a *Research Board*.

8. The WMO ***Executive Council*** (EC) is the executive body of the Organization, which meets annually, implements decisions of the WMO Congress, coordinates the WMO Programmes, decides on the allocation of budgetary resources, provides guidance and takes action on recommendations of Regional Associations and Technical Commissions and on matters affecting international meteorology and related activities.

A. Outcomes/Highlights of the WMO Extraordinary Congress 2025 (Cg-Ext 2025), 79th Session of the WMO Executive Council (EC-79), and the Extraordinary Session of the Executive Council (EC-Ext2025)

9. CMO Headquarters is pleased to report the active participation in EC-79 of the three CMO experts serving on the WMO Executive Council, ***Dr Arlene Laing,*** Permanent Representative (PR) of the British Caribbean Territories, ***Dr Garvin Cummings***, Permanent Representative of Guyana, ***Mr Evan Thompson***, Permanent Representative of Jamaica and *President of WMO Regional Association IV*, as an ex-officio member of the Council. Dr Laing was accompanied by advisors, *Dr. David Farrell*, and *Mr Kenneth Kerr*, CMO Headquarters Science and Technology Officer.

10. The Coordinating Director, *Dr Arlene Laing*, PR of the British Caribbean Territories (BCT), led a delegation to the 2025 World Extraordinary Congress comprised of *Dr. David Farrell*, Hydrological Advisor of the BCT, *Mr Kenneth Kerr*, ***Ms Nardia Magloire***, WMO RA IV Youth Focal Point, the Virgin Island (UK).

WMO Budget Adjustments

11. Council is asked to take special note of the impact to the WMO budget of reduction in contribution in 2025. The WMO Secretariat revised its budget in order to meet its obligations for the period 2026-2027, the last two years of the current strategic period. The Secretariat organized online

sessions to inform the Members of the adjustments that were made by the Secretary General, including a reorganized WMO Secretariat structure and a reduction in staff. It was noted that the restructuring is not expected to have an impact on service to Members.

12. In order to understand the impact of the Secretary General transformation of the Secretariat, the 2025 Extraordinary Executive Council agreed to establish a Task Force for development of recommendations for modification to the Strategic and Operating Plans for 2026-2027 as a result of the ongoing liquidity challenges of WMO. Additionally, the Executive Council in Resolution 4/1 eencourages Members to make voluntary contributions in addition to their fixed assessed contributions whenever possible.

Road Map for Early Warnings for All

13. The World Meteorological Congress adopted the amendment to the Technical Regulations, Volume I, General Meteorological Standards and Recommended Practices (WMO-No. 49) to include Section 6 – Early warning services in Part IV – Meteorological, Hydrological and Climatological Services. The 79th Executive Council, which noted progress in the implementation of the Road Map, had endorsed the procedure followed for the proposed amendments to the Technical Regulations for the delivery of early warning services.

14. CMO Member are requested to

(1) To prioritize the implementation of the technical regulations on Early Warning Services and ensure engagement of national disaster risk management stakeholders;
(2) To contribute to the WMO monitoring of the progress of early warning systems and services.

WMO Integrated Processing and Prediction System (WIPPS) and Artificial Intelligence

15. Considering the contributions of non-traditional sources to the ***WMO Integrated Processing and Prediction System*** (WIPPS) for the support of public weather, hydrological and climate services by NMHSs, EC-79 provided policy guidance on the contribution of non-traditional sources, including those using artificial intelligence (AI), to the WIPPS under Resolution 4.1. Non-traditional sources are considered as entities other than national governmental organizations or partner international/intergovernmental organizations, such as private sector entities, academic sector entities, or non-partner international/intergovernmental organizations.

16. A new **Joint Advisory Group on Artificial Intelligence** was established by EC-79 to guide WMO activities in relation to the development and use of AI intelligence technologies in meteorology and hydrology. Its mandate includes accelerating integration of AI into the WMO systems, with a special focus on incorporating AI into WIPPS, the backbone of all forecasting, and research activities.

17. The WMO Extraordinary Congress 2025, approved Resolution 2.3(1)/1 - **Development of a new WMO Integrated Processing and Prediction System (WIPPS) Strategy Incorporating Artificial Intelligence**. This resolution aims to enhance weather and climate forecasting, improve early warning systems, and bridge capacity gaps in developing countries, including Small Island Developing States. This marks a strategic shift toward leveraging AI and Machine Learning (ML) technologies alongside traditional Numerical Weather Prediction (NWP) systems.

18. The resolution establishes the foundation for AI and ML technologies to become a core component of WMO's global observation, data processing, and prediction architecture and invites Members to:

- Develop pilot projects addressing issues and challenges identified in the AI Exploration Roadmap for WIPPS;
- Organize and participate in conferences, webinars, and training activities to support the transition and share experiences;

- Contribute to the WIPPS Trust Fund to help finance global and regional AI integration initiatives; and
- Collaborate across public, private, and academic sectors to strengthen the use of AI and ML for weather, climate, and hydrological forecasting.

19. The Extraordinary Congress issued a *WMO Call to All Stakeholders to Collaborate on the Development of Artificial Intelligence (AI) and Machine Learning (ML) Environmental Monitoring and Prediction Technologies, Tools and Applications.* It calls for collaboration with the public, private and academic sectors in applying AI and machine learning technologies to strengthen the entire weather, climate, water science to services value cycle. While recognizing AI's revolutionary potential, WMO emphasizes the need to maintain scientific and ethical standards and to uphold the role of National Meteorological and Hydrological Services as the authoritative source of public warnings

20. Council is advised that their NMHSs will need to build technical capacity in AI/ML applications, data science, and digital infrastructure to engage effectively with WIPPS-AI initiatives. To achieve this NMHSs will need to actively participate in WMO-sponsored training, workshops, and regional AI demonstration projects. CMO Headquarters has been advocating with WMO and European partners for the Caribbean to be a region for pilot activities, so that our Members can benefit from the new techniques and understand their strengths and weaknesses.

21. The WMO **Commission for Observation, Infrastructure and Information Systems** (INFCOM) also developed a plan (road map) to address issues and challenges for incorporating AI into WIPPS through WIPPS Pilot Projects, which will serve as a proof of concept for broader AI integration into WIPPS and will be designed to test the scalability and effectiveness of AI solutions in operational settings. The following five WIPPS Pilot Projects are currently ongoing:

a) AI for Nowcasting Pilot Project (AINPP)
b) Data-Driven Weather Forecasting for All (Bris)
c) ECMWF/WMO AI Weather Quest
d) Multi-model Integrated Forecasting and Application (MMIFA)
e) Global Riverine Flood Prediction Pilot Study

Global Greenhouse Gas Watch

22. Council will recall that the 19th *World Meteorological Congress* approved a new *Global Greenhouse Gas Watch* (G3W) for systematic monitoring of greenhouse gases to inform implementation of the Paris Agreement on climate change. The implementation plan of the G3W was approved by the Third Infrastructure Commission in April 2024 and adopted by the WMO Executive Council in June 2024.

23. In October 2025, the Extraordinary WMO Congress approved a new greenhouse gas monitoring initiative **Resolution Cg-Ext (2025)-Doc (2.2): Implementation of the Global Greenhouse Gas Watch (G3W)** aimed at supporting urgent action to reduce heat-trapping gases, which are fueling temperature increases. The Resolution advances G3W objectives by integrating its key components into existing programmes, including the expanded World Weather Watch and the Global Atmosphere Watch Programmes, without adversely impacting their work plans.

24. This new initiative takes advantage of WMO's experience with international cooperation and international data exchange in weather prediction and climate analysis as well as its *Global Atmospheric Watch* and *Integrated Global Greenhouse Gas (GHG) Information System*, which have been operating since 1989. The proposed components are:

- A comprehensive, sustained, global set of surface-based and satellite-based observations of CO_2, CH_4 and N_2O concentrations, total column amounts, partial column amounts, vertical profiles, and fluxes and of supporting meteorological, oceanic, and terrestrial variables, internationally exchanged as rapidly as possible
- Prior estimates of the GHG emissions based on activity data and process-based models;
- A set of global high-resolution Earth System models representing GHG cycles;

- Data assimilation systems that optimally combine the observations with model calculations to generate products of higher accuracy.

25. Council will note that G3W has implications for Caribbean NMHSs, which do not have the technical capability, instrumentation and trained personnel to measure and analyze GHGs. Therefore, NMHSs will be expected to coordinate closely with environmental, energy and land use agencies responsible for national emissions, to obtain and share data with WMO's GHG Data Hub.

WMO Statement on Weather Modification

26. At the 79th Executive Council Meeting, WMO approved Resolution 7: "WMO Statement on Weather Modification," reaffirming WMO's neutral position on weather modification. The Resolution notes that WMO neither promote nor discourages the practice of weather modification, which is the deliberate intervention in the atmosphere in an attempt to influence local weather conditions, typically through techniques like cloud seeding.

27. The Resolution clarifies WMO's official stance, emphasizing that the statement is not a policy on weather modification nor a guidance. It stresses that any weather modification activity must be grounded in sound scientific research, with clear hypotheses, rigorous evaluation and transparency. The Statement distinguishes weather modification from climate intervention and recommends that:

- Members should approach weather modification cautiously, considering the uncertainties highlighted in the WMO guidance, and ensure operational programmes are supported by credible science, evaluation frameworks, and transparency.
- Weather modification activities should adhere to high ethical and transparency standards. Members should carefully consider potential impacts and engage civil society throughout the project lifecycle.

28. EC-79 also made recommendations on procedures for elections and appointments, including the appointment of the Secretary General.

IMO Prize to Prof Gerhard Adrian

29. The 79th Executive Council honoured Prof. Gerhard Adrian as the 69th IMO Prize winner. Prof Adrian, retired former President of WMO, was honoured for his exceptional scientific leadership and pioneering work in numerical weather prediction (NWP), international cooperation, and data policy reform over a career spanning five decades. The WMO Unified Data Policy was approved by the WMO Congress during his tenure as President of WMO.

WMO Youth Action Plan

30. Council is informed that WMO established the pioneering position of WMO Youth Focal Point for each of its Regional Associations. The Coordinating Director, PR of the British Caribbean Territories, nominated Ms Nardia Magloire of the Virgin Islands for RA IV (North America, Central America and the Caribbean), who was then selected by the RA IV Management Team. Council is asked to note that Ms Magloire contributed to the development of the WMO Youth Action Plan that was submitted first to EC-79 for approval before being advanced to the Congress.

31. Council is asked to further note that the Coordinating Director invited Ms Magloire to join the BCT delegation to the Extraordinary Congress as the Youth Action Plan was scheduled for approval by the Congress. Ms Magloire, who was a virtual participant, contributed to the revision of the Acition Plan as requested during the Congress. After agreement on the revision, the WMO Youth Plan was approved by the 2025 Extraordinary World Congress.

B. Highlights of the 19th session of RA IV, 27-29 March 2025

32. **Re-election of Mr. Evan Thompson as President of WMO RA IV**: CMO proudly congratulated Mr. Evan Thompson, Principal Director of the Meteorological Service of Jamaica and

Permanent Representative of Jamaica with WMO, on his re-election as President of WMO RA IV. His continued leadership has ensured strong Caribbean representation and advocacy on regional and global meteorological issues. Re-elected to the position of Vice President of WMO RA IV was Ms Luz Graciela de Calzadilla, Director of the Institute of Meteorology and Hydrology of Panama (IMHPA).

33. **Other Officers from CMO Member States selected by the 19th RA IV Session:**

- Mr Peter Clarke (Jamaica), Regional Hydrological Adviser and Chair of the Hydrological and Water Coordination Panel:
- Mr Kerry Powery (Cayman Islands, British Caribbean Territories), Chair of the Infrastructure Committee:
- Mr Kenneth Kerr (CMO Headquarters, British Caribbean Territories), Vice-chair of the Services Committee
- Mrs Arlene Aaron-Morrison (Trinidad and Tobago), Vice-chair of the Hurricane Committee

C. Issues emerging from meetings of the WMO Technical Commissions and Research Board in 2025

Extraordinary Session of the WMO Weather, Climate, Hydrological, Marine and Related Environmental Services and Applications (SERCOM-Ext2025)

34. Council is asked to note that the *Extraordinary Session of the WMO Weather, Climate, Hydrological, Marine and Related Environmental Services and Applications* (SERCOM-Ext2025), was held on 18-20 March 2025 as a virtual session. The meeting was attended by *Dr Arlene Laing*, as the Principal Delegate of the British Caribbean Territories (BCT) delegation, which included *Mr Kenneth Kerr* and *Mr Haley Anderson* (CMO Headquarters), *Ms Kathy Ann Caesar*. Decisions are available in the final report of the Extraordinary SERCOM.

35. The Extraordinary SERCOM amended the Technical Regulations to include a new Section 6 – Early Warning Services number of measures to boost the provision and use of tailored services in the face of rapid climate and societal change to optimize support for key priorities, including ***Early Warnings for All*** and supporting climate adaptation and sustainable development.

36. The SERCOM also approved Updated Guidance for Implementation of the WMO Cataloguing of Hazardous Weather, Climate, Water and Related Environmental Events (WMO-CHE). Council is reminded that the 18th World Meteorological Congress approved Resolution 12, (Cg-18) – WMO Methodology for Cataloguing Hazardous Weather, Climate, Water and Space Weather Events. The Severe Weather Case Database for the Caribbean, which was developed by CIMH in collaboration with CMO Headquarters, follows the WMO-CHE guidelines for cataloguing severe weather events.

37. CMO experts in SERCOM are noted in the list below:

a) Standing Committee on Services for Aviation (SC-AVI);
   Co-Chair, Expert Team: Ms Kathy Ann Caesar/BCT
b) Standing Committee on Services for Agriculture (SC-AGR);
   Expert Teams: Ms Shontelle Stoute/BCT, Ms Shanea Young/Belize, Ms Arlene Aaron-Morrison/Trinidad & Tobago
c) Standing Committee on Climate Services (SC-CLI);
   Expert Team: Mr Adrian Trotman/BCT
d) Study Group on Integrated Health Services (SG-HEA);
   Dr Roche Mahon/BCT

SERCOM Management Group
   Mr Evan Thompson, President RA IV/ Jamaica
National Focal Point for Severe Weather Forecasting Programme

Dr Arlene Laing/BCT
National Marine Services Focal Point
Mr Dale Destin/Antigua and Barbuda, Ms Carol Surbath-Ali/Trinidad & Tobago, Eron McPherson/Guyana
National Focal Point for Climate Information Systems
Mr Komalchand Dhiram/Guyana, Mr Kaidar Kissoon, Trinidad & Tobago, Ms Kerrie Forbes/BCT, Ms Annie Carrette Joseph/Dominica

WMO Commission for Observation, Infrastructure, and Information Systems (INFCOM-3)

Protecting Radio Frequencies Vital for Weather, Climate, and Environment

38. Council is reminded that WMO has increased its coordinated efforts to ensure the protection of radio frequency bands that are vital for weather forecasts and life-saving early warnings. Weather forecasts, climate monitoring, and other environmental services all depend on observations and communication in specific radio frequency bands.

39. Council will recall the Coordinating Director's reports to sessions of the Council on the CMO Headquarters efforts to protect radio frequency since the 60th Council (2020, Virtual, St Vincent and the Grenadines), including appeals to the *Caribbean Telecommunication Union* (CTU) on supporting coordination for promotion of safety. Council is advised that CMO Headquarters was invited to join the Caribbean Spectrum Management Task Force (SMTF), which is led by the CTU. The Task Force has developed an Action Plan and has met three times in 2025. In May, the Science and Technology Officer, Mr Kerr, participate in the 2nd Caribbean Spectrum Management Conference and a meeting of the SMTF.

40. Also in May 2025, WMO issued its Preliminary Position on the World Radio Communication Conference 2027 (WRC-27) Agenda. Key WMO positions by agenda items and relevance for Caribbean meteorological applications have been shared with regional stakeholders and regulators.

41. NMHSs are advised to use WMO's positions to engage and work with national spectrum management and telecommunication regulators and authorities to represent meteorological spectrum interests and advocate for protection of meteorological spectrum bands that are vital for safety and the .

42. The CMO Headquarters coordinated with regional telecommunications experts to provide reviews of the new WMO/ITU Guide, "Handbook on Use of Radio Spectrum for Meteorology (WMO-No. 1197)". The revised edition of the WMO/International Telecommunication Union (ITU) Handbook, entitled "Use of Radio Spectrum for Meteorology: Weather, Climate, Water and related Environmental Applications" has been jointly developed by experts of the WMO Expert Team on Radio- Frequency Coordination (ET-RFC) of the Commission for Observation, Infrastructure and Information Systems (INFCOM), and the Working Party 7C (WP 7C) - Remote sensing systems under the Radiocommunication Sector of the International Telecommunication Union (ITU-R) Study Group 7 (Science Services).

43. The Council is reminded that Caribbean decision-makers and regulators need to be well-informed and up-to-date on the value of the spectrum bands for different applications associated with operational weather forecasting, climate and environmental monitoring and research in weather, climate, water, and related environmental sciences.

WMO Research Board

Machine Learning and Artificial Intelligence in Weather Prediction

44. Council is informed that the Coordinating Director serves as the WMO RA IV Co-Chair of the recently established Expert Team for Research and Earth-system Modeling. She continues to serves as the RA IV Representative to the WMO Research Board. In that role, she helped to

organize a webinar on **"Updates on Research, modelling and AI for weather forecasting in North America, Central America, and the Caribbean"** on 29 October, which had more than 500 participants from across the world.

Research Board Task Team on Early Warnings for All

45. Council is reminded that Coordinating Director**, Dr Arlene Laing** co-chairs the WMO Research Board Task Team on Early Warnings for All, with **Prof. Jim Hurrell** of Colorado State University. The team, which met twice in 2025 seeks to:

- better understand where targeted physical and social science research will support the urgent requirement to build effective multi-hazard early warning institutions, infrastructures and processes, and
- identify from current research activities the emerging and future hazards and effective responses to them, that have not yet been identified through the WMO Roadmap process, including, for example. compound and cascading hazards.

At the second meeting of the Task team, a presentation was made by the Kings College London on their study of "The international relations of tropical storms in the Caribbean", which is aligned with the task team goals.

46. Council is asked to note that the Research Board ***Task Team on Social Science and Geophysical Science Integration*** (TT-SSGSI) completed its report on the integration of social science and geophysical sciences in the context of research to operations in the WMO research programmes.

D. UN Early Warnings for All

47. The WMO Congress **Resolution 4 (Cg-19)**, references the UN global initiative, led by the WMO and UN Disaster Risk Reduction (UNDRR), to protect all persons from hazardous weather, water, or climate through early warning systems by 2027.

48. ***Early Warnings for All*** is the **highest priority** of the *19th World Meteorological Congress*. The WMO *Early Warnings for All: Executive Action Plan 2023–2027* was launched by the UN Secretary-General, ***António Gutteres,*** at the 27th Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC/COP 27) in November 2022 and approved by the Parties.

49. At the Extraordinary Congress in October, the Secretary General of WMO launched a "Call to Action" for accelerating the implementation of Early Warnings for All, which was endorsed by the Members, as key to achieving universal early warning coverage by 2027 — a key milestone under the UN's Early Warnings for All (EW4All) initiative.

50. The UN Secretary General, ***António Gutteres,*** participated in a special session of the WMO Congress and reiterated the value of early warnings for saving lives and property.

51. The Council is reminded of the four pillars of a multi-hazard early warning system (MHEWS), centred on people and having appropriate governance, institutional arrangements, multi-sector partnerships, and cultural context, are:

- Pillar 1 – Disaster risk knowledge and management (led by UNDRR)
- Pillar 2 – Detection, observation, monitoring, analysis, and forecasting (led by WMO)
- Pillar 3 – Warning dissemination and communication (led by ITU)
- Pillar 4 – Preparedness and response capabilities (led by IFRC)

52. WMO leads the implementation of Pillar 2, and supports Pillars 1, 3 and 4. Similar contributions are being made by the National Meteorological and Hydrometeorological Services at the national and regional levels with the support of the Organs of the CMO and other partners. An

Early Warnings for All Dashboard, where data for the four Pillars, as well as those for disaster risk reduction (DRR) strategies and cross-cutting enablers can be monitored and visualized, has been established to track the progress of global indicators, implementation indicators, and MHEWS country capacity.

53. Council is to note ***selected*** CMO Headquarters activities in 2025, in support of *Early Warnings for all* including:

- Co-organized workshops on the *Common Alerting Protocol* (CAP*)*, January 2025
- Member, WMO RA IV Hurricane Committee; contributor to the Operational Plan
- Co-chairing the Severe Weather Forecasting Programme Eastern Caribbean Management Team, for high-impact severe weather that occur any time of year, including drafting a Severe Weather Operational Plan and supporting the development of a new severe weather case catalogue and database in the Caribbean.
- Contributing to the Regional Early Warning System Consortium that is led by CDEMA
- Increased Lightning Safety Awareness through a video contest for schools

E. WMO Integrated Global Observing System (WIGOS)

Implementation of Global Basic Observation Network (GBON)

54. Council recognizes that high quality and timely observations are fundamental to the accuracy of weather forecasting. As such, the CMO Headquarters helps Member States to become compliant with WIGOS and GBON requirements, thereby supporting real-time sharing and integrating of data, conducive to rapidly-evolving hazards, and in archives, for climate analysis, research, and risk knowledge.

55. Council is asked to note that the WMO *Global Basic Observing Network* (GBON) is intended to ensure availability and international exchange of basic surface observation data, which underpin all weather, climate and water services and products for the public good of all nations. The GBON is designed, defined and monitored at the global level, with its implementation having **direct positive effect on the quality of weather forecasts, thus helping improve the safety and well-being of people around the world**. Council will recall that GBON implementation started on 1 January 2023.

Systematic Observations Financing Facility (SOFF): Supporting implementation of GBON

56. The *Systematic Observations Financing Facility* (SOFF) is a financing and technical mechanism to support the *Global Basic Observing Network* (GBON). The SOFF, which was formally launched at UNFCCC COP26, will allow developing countries to deliver their contribution to GBON. SOFF investment focuses on long-term observational data exchange as a measure of success.

57. The intent is to support operating and maintenance costs of a country's basic observation infrastructure through results-based finance. It will produce local benefits while delivering on a global public good – that of better global weather forecasts and climate information for all nations. SOFF is a UN fund, co-created by WMO, UNDP and UNEP to close the most severe gaps, with priority given to Least Developed Countries and Small Island Developing States (SIDS).

58. More than 65 partner institutions are to provide systematic, standardized, and coordinated support to beneficiary countries to achieve compliance with the GBON, including CMO Members: Belize, Barbados, Dominica, Grenada, Guyana, Jamaica, Saint Lucia, St Kitts and Nevis, St Vincent and the Grenadines, and Trinidad and Tobago.

59. Council is informed that only Belize has reached the Investment Phase of SOFF. Antigua and Barbuda and Guyana are in the Investment Phase Pipeline. The Investment phase enables countries to close the GBON investment and capacity gap. The Compliance phase supports

sustained GBON compliance and enables access to improved weather forecasts and climate analysis products.

60. CMO Headquarters has been supporting the implementation of SOFF in the CMO Member States through coordinating with the peer advisor institutions and advising Members during the SOFF Readiness phase, and sharing guidance and regional expertise to SOFF implementing partners such as the World Food Programme in the Caribbean and the Inter-American Development Bank (IDB).

61. Council is asked to note that CMO Headquarters has been advocating for a Regional Approach to SOFF implementation for greater efficiency and leveraging of existing infrastructure and regional arrangements. Recognizing that the Caribbean has an established upper air network that provides coverage for multiple countries, which precludes the requirement for an upper air station per country, the CMO Headquarters has been seeking an optimal strategy in collaboration with WMO, NOAA, and SOFF Beneficiary States.

62. A regional SOFF workshop was held on 5-7 May 2025 in Jamaica with the beneficiary countries, peer advisors, and implementing partners. The workshop focused on the optimal methods for closing the gap in observations and data exchange.

63. Council is reminded of the actions required of CMO Member States, per Resolution 2 of the WMO Extra-ordinary Congress (2021) for GBON:

- **Urges** Members to immediately commence their implementation of this network, including the necessary preparations for GBON station designation and GBON data exchange, if needed in a phased approach, as allowed by their individual capacities, where applicable, in combination with support of multilateral and bilateral development partners, and financial mechanisms such as the *Systematic Observations Financing Facility* (SOFF);

- **Urges further** Members to support the implementation of GBON, including by supporting the development and establishment of SOFF and to consider contributing resources – financial, technical or in-kind – to its development and operation.

64. With the support of the CMO Headquarters Science and Technology Officer (STO), CMO Members have been making progress towards reaching compliance with GBON. In 2024, five CMO Members (Antigua and Barbuda, Barbados, Grenada, Guyana, and Trinidad and Tobago) were exchanging observations hourly for the full 24 hours. As of the third quarter of 2025, the number of Members achieving full GBON station-level compliance increased to 9, representing 56% of Members, a 25% improvement. The number of fully GBON-compliant stations also increased, from 7 of 23 stations (30%) in November 2024 to 11 stations (48%) in 2025. The Member countries with stations that became GBON-compliant in 2025 are Belize, Jamaica, Montserrat, and Saint Lucia.

65. Other Members were exchanging data at 3-hourly and 6-hourly intervals or exchanging hourly for less than a 24-hour period. Council is referred to the report of the Annual Meeting of the Directors of Meteorological Service (Item 9) for further details.

WMO Information System (WIS) and WIGOS

66. Council will recall that the *WMO Integrated Global Observing System* (WIGOS) is an all-encompassing approach to the improvement of WMO's global observing systems, needed in all countries. WIGOS, together with *WMO Information System* (WIS), form the basis for the provision of **accurate, reliable and timely weather, climate, water and related environmental observations and products** by all Members and WMO Programmes, which would lead to improved service delivery. Both WIGOS and WIS are very essential to all technical and scientific activities of Meteorological Services in the Caribbean and worldwide.

67. The Council will recall that WIGOS became operational in 2020 and that, as with all Member States of WMO, CMO Member States should be implementing WIGOS. The goal is for all Member States and their partners to benefit from a fully operational system.

68. National Meteorological and Hydrological Services have been stewards of the long-term observations that underpin climate knowledge, which in turn informs climate action. WMO Congress requested Members to implement **WIGOS, WIS, and the WMO Unified Data Policy, which ensures that core earth system data needed for prediction and analysis for the public good of all nations is of the highest quality**

WIS 2.0 Transition Status

69. Council is advised that on 1 January 2025, the WMO Information System 2.0 (WIS 2.0) became operational, marking the start of the critical WMO GTS-to-WIS 2.0 transition phase (2025–2030). To facilitate a coordinated and seamless transition, WMO has developed a dedicated **WIS 2.0 Transition Guide.** During this transition period, all NMHSs are required to fully migrate their non-aviation weather data from the GTS to the WIS 2.0 platform.

70. To achieve full WIS 2.0 transition, NMHSs are required to both publish and retrieve data through their national WIS 2.0 node. This means NMHSs must publish their own data to WIS 2.0 (through their national node), subscribe to data they want to receive and retrieve (download) the data themselves. At present, all CMO Members are only using their WIS 2.0 nodes for data exchange (publishing), even though the software supports both publishing and retrieval functions.

71. Recommended to Members NMHSs:
- Begin testing real-time data retrieval functions using WIS 2.0
- Establish Standard Operating Procedures (SOPs) for data retrieval and exchange, subscription management, and troubleshooting during the GTS–WIS 2.0 transition.

72. CMO Headquarters, in collaboration with WMO and the RA IV WIS 2.0 Expert Team, will facilitate regional training and technical support to help Members fully implement, test, and validate their WIS 2.0 nodes ahead of the 2030 full migration deadline.

73. Council will recall that in June 2023, CMO Headquarters hosted the WMO WIS2.0 in a Box Workshop for 19 participants from 15 countries, where participants learnt how to install and configure the software to enable ease of local and international data exchange. Due to the support of a core group of participants, CMO and WMO, by October 2023, CMO States were exchanging data nationally and internationally, and were among the first to pilot this new technology.

74. CMO Headquarters is helping to strengthening WIGOS and WIS 2.0 capacity, which will directly enhance forecast accuracy, support the delivery of impact-based services, and contribute to the realization of the Early Warnings for All (EW4All) objectives across the Caribbean region.

Council will recall that CMO and WMO signed a Letter of Agreement whereby WMO provides cloud services to support a CMO Node of WIS for four years. WMO has recommended affordable options for CMO Headquarters to maintain the WIS2.0 node after the period of the agreement.

Regional WIGOS Centre

75. Council is reminded that CMO Headquarters is ensuring the availability, accuracy, and timeliness of weather, climate, and water observations and related data and information from National Meteorological and Hydrometeorological Services

76. Since December 2023, the United States, Canada, CMO Headquarters, Trinidad and Tobago and Costa Rica began piloting a ***Regional WIGOS Centre*** **for WMO RA IV** (North America, Central America, and the Caribbean) - to ensure the quality, accuracy, and timeliness of observations. **CMO Headquarters and Trinidad and Tobago Meteorological Service are responsible for the data**

quality and metadata management for the English-speaking Caribbean, respectively. This effort has improved the availability and quality of observational data of CMO Members.

77. For CMO Member NMHSs, gaps remain in understanding the interconnectedness of WIGOS tools and WIS 2.0, in engagement with contributing nodes of the RWCs, and in data-sharing practices across observation networks.

78. To address these needs, CMO Headquarters, in collaboration with WMO and CREWS, will provide targeted capacity-building opportunities in the first quarter of 2026. This will include two hands-on regional training workshops for national focal points and IT personnel of NMHSs.

F. The Global Framework for Climate Services (GFCS)

79. The Council will recall that the ***Global Framework for Climate Services*** (GFCS), a United Nation (UN)-led initiative which started in 2012, spearheaded by WMO, is being implemented throughout the world to guide the development and application of science-based climate information and services in support of decision-making.

80. As a framework with broad global participation and reach, GFCS enables the development and application of climate services to assist decision-making at all levels in support of addressing climate-related risks and outcomes at national, regional and global levels. The priority areas for the GFCS are (i) Agriculture and food security (ii) Disaster risk reduction, (iii) Energy (iv) Health and (v) Water. The GFCS is currently being implemented through eight global projects, many with an emphasis on developing countries and Small Island Developing States.

81. Through the CREWS Initiative, CMO Headquarters has been supporting the development of governance frameworks, legislation, and other mechanisms to support Members in developing Climate Services. That includes Strategic Plans and National Frameworks for Weather, Water, and Climate Services and in support CIMH as need in their implementation of the Climate Services and Related Applications (ClimSA) project.

G. Disaster Risk Reduction and Regional Severe Weather Forecasts and Warning Systems

Tropical Cyclone Programme

82. The Caribbean Meteorological Council is aware that activities within the WMO *Tropical Cyclone Programme* (TCP) are among the most important to the Caribbean and other tropical basins. The TCP is essential to help reduce the disaster risk associated with the tropical cyclones. The most critical regional activity under the TCP is the *Hurricane Committee*, serving the *North Atlantic, East Pacific and Caribbean Basin*. The Hurricane Committee has at its core, *the US National Hurricane Center*, which is one of WMO's primary *Regional Specialized Meteorological Centres* (RSMCs) for tropical cyclones.

83. Most Meteorological Services in CMO States are represented on the Hurricane Committee which, along with the relevant regional and national disaster management community, work continuously towards the reduction of disaster risks by tropical cyclones, particularly the loss of lives. The Hurricane Committee defines and routinely updates the warning system for tropical cyclones in the North America, Central America and the Caribbean region, including the areas of responsibility of the NMHSs in each Member State in the provision of tropical cyclone forecasts and warnings. The warning system includes back-up arrangements between Meteorological Services with warning responsibilities.

84. The ***47th WMO RA IV Hurricane Committee*** met on 31 March to 3 April in San Salvador, El Salvador. The meeting report was finalized after a period of review following the meeting. In addition to the updating of the Operational Plan and report of impacts by Members, the following

side events were focused on emerging and ongoing initiatives of WMO, UNDRR, UNESCO-IOCARIBE, and other partner organizations involved in observations, prediction, and research, and delivery and communication of tropical forecasts and warnings. A special session focused on tropical cyclone research, including modeling with artificial intelligence and its impact on weather prediction, which indicated skillful track forecasts but poor intensity forecasts. Another panel on ocean observations included a presentation by Dr Farrell, Principal of CIMH, on their collaboration with Rutgers University and others to deploy marine instruments to observe the sub-surface of the Caribbean and nearby Tropical Atlantic.

85. Council is asked to note that CMO Headquarters co-sponsored the participation of Mr Gerard Tamar of Grenada and Mr Gregory Cato of St Vincent and the Grenadines in the 47th Hurricane Committee, where they presented on their experience with Hurricane Beryl (2024).

WMO Severe Weather Forecasting Programme (SWFP) Eastern Caribbean

86. Council will recall endorsing a proposal by CMO and partners in 2015 to implement a WMO *Severe Weather Forecast Demonstration Project* (SWFDP) Eastern Caribbean, which was established in 2016. In June 2019, the 18th WMO Congress designated the transition of the SWFDP to be designated as the **Severe Weather Forecasting Programme (SWFP)** Eastern Caribbean (EC)**.** Council is reminded that in 2021, it was agreed that products on the SWFP Extranet could be made available to NMHSs in Caribbean states outside of the formal EC domain. Météo-France Martinique hosts the ***Regional Forecast Support Facility*** (RFSF) of the SWFP EC, including the Extranet that serves NWP products and observations to support severe weather forecasts.

87. The SWFP Regional Subprogramme Management Team (RSMT) is co-chaired by ***Mr Emmanuel Cloppet,*** Météo-France Antilles et Guyane, and ***Dr. Arlene Laing***, CMO Headquarters. Other CMO representatives on the RMST include ***Ms Kathy-Ann Caesar*** of the CIMH, as the training lead, and ***Mr Dale Destin***, Director of Antigua and Barbuda Meteorological Service, representing CMO National Meteorological Services.

88. The Management Team has met three times since CMC67 (Tortola, November 2024), on 18 December 2024 and 10 January 2025 (virtually) and on 4 April 2025 on the side of the 47th Hurricane Committee in San Salvador, El Salvador in hybrid mode.

89. The RSMT in April 2025 agreed to the expansion of the domain to cover all Caribbean Islands, including the Bahamas, and to rename the programme, **Severe Weather Forecasting Programme Caribbean**.

90. RFSF Martinique reported on the operational performance of the AROME model, the first operational high-resolution ensemble model for explicit convection prediction in the region. The model has a 1.3km grid for deterministic model and a 2.5km grid for the ensemble, able to resolving small island circulations. The RSFP continues provision of automatic products, including new excessive heat products that are being tested for alerts in the French West Indies.

91. Co-Chairs, Dr Laing and Mr Cloppet, reported to the 47th Hurricane Committee and the RSMT meeting on the activities of the SWFP, achieved through direct support to the SWFP and leveraging related workshops.

92. Following the meeting, the WMO Secretariat issued invitations to the PRs of the Members in the Caribbean **to nominate a Severe Weather focal point**. Forecasters trained under the SWFP are encouraged to train fellow forecasters on the competencies learnt and to use the SWFP-EC Extranet products.

93. CMO Headquarters helped to organize and presented to a well-received Operational Workshop on 21-23 July 2025, as a virtual workshop hosted by CIMH. The technical workshop

focused on the use of the SWFP Extranet, Communication, and Public Weather Service and the CIMH DEWETRA platform using case exercises.

94. The Coordinating Director met with *Ms Virginie Schwarz*, Executive Director of Météo-France, on the side of the 79th WMO Executive Council, 16-20 June 2026, to review the SWFP and other collaborative activities, per the formal *Working Arrangements* between CMO *and* Météo-France.

95. With funding from the Climate Risk and Early Warning Systems (CREWS) Caribbean, one forecaster from the Antigua and Barbuda Meteorological Service received hands-on severe weather forecast training at the Meteo-France Martinique on 12-14 November 2025.

96. Plans for the Severe Weather Forecasting Programme Caribbean for 2025 to 2026, include:
- Forecaster exchange and attachments for familiarization with forecast areas of responsibility
- Enhancement of the severe weather case database including translation to other languages
- At least one workshop focused on operational forecasting and competencies

97. CMO Headquarters hosted one intern sponsored by the CCRIF-SPC during August to November 2025, to support the activities of the SWFP Caribbean, specifically:

- Expansion of the geographical aspects of the severe weather case catalogue with a focus on high-impact cases.

Business Continuity Management Guidelines for WMO Members

98. Council will recall that the Executive Council endorsed the *Business Continuity Management Guidelines for WMO Member*s, as approved and recommended by the Third Session of the WMO Services Commission. The guidelines were developed to ensure preparedness against events that may disrupt operations and services. WMO formed a *Task Team on the Business Continuity Management* to support National Meteorological and Hydrological Services (NMHS) with implementation. *Mr Haley Anderson*, CMO Headquarters Project Development Officer, has been serving on the Task Team since July 2024. The Business Continuity Management Guidelines for WMO Members (WMO-No. 1361) were published in 2025. Council is asked to urge and support their NMHS to develop and implement their business continuity plan.

ACTIONS PROPOSED TO COUNCIL

Council is asked to:

(i) **Note** the decisions of the Extraordinary Congress, the 79th session of the Executive Council (EC), the Extraordinary Executive Council and the Technical Commissions

(ii) **Note** the results of the elections and appointments of CMO experts in the leadership in WMO Regional Association IV

(iii) **Continue** to monitor the budget situation with WMO as there may be impact to the technical and other support for Members.

(iv) **Encourage** Member States that have not yet done so to nominate national focal points for radio frequency coordination, to support protection of spectrum bands vital for earth observations and meteorological applications, as requested by WMO Infrastructure Commission

(v) **Urges** Members to prioritize the implementation of the technical regulations on early warning services and to mobilize resources including through project development as well as to ensure engagement of national disaster risk management stakeholders;

(vi) **Encourages** Members to contribute to the WMO monitoring of the progress of early warning systems and services;

(vii) **Urges** Members to support the developmental needs of Members in further enhancing the delivery of their national early warning services, leaving no one behind.

(viii) **Note** the activities of the Research Board, including the Task Team on Early Warnings for All.

(ix) **Urge** CMO Member States to ensure that their NMHSs complete activities for the Operational Phase of WIGOS

(x) **Urge** CMO Member States to become compliant with GBON, following the guidelines from WMO

(xi) **Commit** Members' NMHSs to maintaining their support and participation in the CMO WIS2.0 Node

(xii) **Note** the activities on the Virtual *Regional WIGOS Centre* (RWC) as a collaboration among the US, Canada, CMO Headquarters and the Trinidad and Tobago Meteorological Service

(xiii) **Continue** its strong support for the *Global Framework for Climate Services* and to **urge** Member States to actively participate in GFCS projects and activities

(xiv) **Note** and **support** the important work of the regional Hurricane Committee

(xv) **Note** and **support** the important work of the Severe Weather Forecasting Programme in the Caribbean

(xvi) **Urge** Members to develop and implement a business continuity plan following the **Business Continuity** Management Guidelines for **WMO** Members (**WMO**-No. 1361)

(xvii) **Acknowledge** the contribution **of** new WMO Regional Association IV Youth Focal Point to the approved WMO Youth Action Plan and **encourage** Members to support the activities of the Youth Action Plan in RA IV

CMO Headquarters
November 2025